

AMENDMENTS TO THE SPECIFICATION

At page 6 beginning in line 20, delete paragraph [0011].

Replace the paragraph beginning at page 18, line 21 with:

In the first embodiment, the light receiving elements 23a and 23b for light amount monitoring are evenly spaced at two locations along the same circumference as the light receiving elements 31 for rotation angle detection. The light receiving elements 21a to 21d for position monitoring are evenly spaced at four locations along the same circumference as the light receiving elements 31 for rotation angle detection. In the present embodiment, light receiving elements 23a to 23d for light amount monitoring and light receiving elements 21a to 21d for position monitoring are both arranged at four locations along the same circumference as the light receiving elements 31 for rotation angle detection. Further, the light receiving elements for light amount monitoring and the light receiving elements for position monitoring are not evenly spaced. As an example, the light receiving elements 23a and 23c for light amount monitoring, and the light receiving elements 23b and 23d for light amount monitoring are respectively 180 degrees opposite to each other with respect to the center point 20 of the track pattern of light receiving elements. However, the light receiving elements 23a and 23b, and the light receiving elements ~~23b~~ 23c and 23d are not shifted 90 degrees from each other, but are respectively spaced at an interval of $(m + 1/2) P'$ where m represents an integer. Namely, the light receiving elements 23a and 23b, and the light receiving elements ~~23b~~ 23c and 23d are respectively spaced at an interval of $(\text{odd number} / 2) P'$. Likewise, the light receiving elements 21a and 21c for position monitoring, and the light receiving elements 21b and 21d for position monitoring are respectively 180 degrees opposite to each other with respect to the center point 20 of the track pattern of light receiving elements. However, the light receiving elements 21a and 21b, and the light receiving elements ~~21b~~ 21c and 21d are not shifted 90 degrees from each other, but are respectively spaced at an interval of $(n$

+ $1/2$) P' where n represents an integer. Namely, the light receiving elements 21a and 21b, and the light receiving elements ~~21b~~ 21c and 21d are respectively spaced at an interval of (odd number / 2) P' .

Replace the paragraph beginning at page 20, line 10 with:

However, if the positional relationship between the light source 1 and the concave mirror 7 are not properly adjusted, the light beams 9 are not reflected from the concave mirror 7 in the form of substantially parallel light beams, but travel outward as shown in Fig. 7. In this case, the same angular interval of the intensity distribution of light is formed on the surface of the light receiving element group ~~4~~ 2, whereas the width of the intensity distribution of light in the circumferential direction corresponding to the angular interval is broadened. On the other hand, the detection region of the light receiving element group is not expanded, thereby generating faulty parts that fail to detect signals. Signal components of these faulty parts vary with time by the rotation, and thus a monitoring signal is given components of sinusoidal variation.

Replace the paragraph beginning at page 21, line 16 with:

Likewise, the light receiving elements 21a and 21c for position monitoring, and the light receiving elements 21b and 21d for position monitoring are respectively 180 degrees opposite to each other with respect to the center point 20 of the track pattern of light receiving elements. The light receiving elements 21a and 21b, and the light receiving elements ~~21b~~ 21c and 21d are respectively spaced at an interval of $(n + 1/2) P'$ where n represents an integer. Thus a stable monitoring signal can be given.